ETHNOLOGY.—*Medicinal plants used by Choctaw, Chickasaw, and Creek Indians in the early nineteenth century.* T. N. Campbell, University of Texas. (Communicated by Frank H. H. Roberts, Jr.)

What is known today about medicinal plants used by the Indians of the Southeastern United States is based largely on information accumulated by ethnologists within the present century. Most of this has been summarized by Taylor (1940), who has compiled data on 185 plants used by eight Southeastern groups—Cherokee, Catawba, Creek, Alabama, Koasati, Chickasaw, Choctaw, and Natchez. The literature on these Indians prior to the period of enforced removal (circa 1830–1850) contains very little specific information on medical ethnobotany. For this reason the material presented below is of special interest. It was obtained by Gideon Lincecum, a self-taught physician and naturalist, from Choctaw, Chickasaw, and Creek Indians in the States of Mississippi and Georgia during the years 1800–1835. It is a partial but acceptable record of medicinal plants used by these three Indian groups in the early nineteenth century. The comparatively early date of this record makes it possible to note changes that have taken place in the herbal medicine of these Indian groups over a period of approximately one hundred years.

The names and medicinal uses of the plants presented on the following pages have been taken from Lincecum's medical herbarium of plants native to the Southeastern United States. This herbarium, which consists of 305 pressed plants, is now in the possession of the University of Texas Library in Austin. The plants were collected by Lincecum in eastern Mississippi and southeastern Texas over a long period of time, but principally between the years 1830 and 1868. On the outside of each folder, in Lincecum's handwriting, is the scientific name of the plant, the English name or names, occasionally an Indian name, along with data on the part or parts of the plant used for medicinal purposes, the method of preparation, the medicinal properties (based on Lincecum's own clinical observations), and the disease for which the prepared drug was used in Lincecum's practice. Twenty-two of the folders include miscellaneous remarks on the medical use of the enclosed plants by Choctaw, Chickasaw, and Creek Indians. The plants from these 22 folders have been examined and identified by Dr. Benjamin C. Tharp, Department of Botany, University of Texas, whose assistance is gratefully acknowledged.

Published biographic materials afford some basis for evaluating the reliability of Lincecum's ethnobotanical notes. (Geiser, 1948, pp. 199–214; Lincecum, 1904a) Lincecum was not medically trained in the orthodox manner of his day, i.e., by study at a medical college or with a licensed practitioner. He learned medicine by reading medical literature. He learned systematic botany in the same way, and it is of interest to note that the specimens in his herbarium are, with few exceptions, accurately classified for his time. This lack of formal training probably explains some of Lincecum's readiness to adopt Indian herbalism.

Of more importance is the biographic evidence of close association with the three Indian peoples in question. The first 25 years of Lincecum's life (1793–1818) were spent on the outer fringe of the Georgia frontier, where he had ample opportunity to observe the Creek Indians. For a period of 30 years (1818–1848) he lived in eastern Mississippi near the present town of Columbus. Until the period of removal, this was near the boundary that separated the Choctaw and the Chickasaw. For several years Lincecum operated two trading posts, one patronized principally by the Choctaw, the other by the Chickasaw. He spoke the languages of both groups. During the early 1820's he recorded—in the Choctaw language, using the Roman alphabet and various diacritical marks—a long traditional history of the Choctaw as related by an old and learned Choctaw man. A translation of this survives and a portion of it has been published (Lincecum, 1904b).

It is very clear from his autobiography that Gideon Lincecum had a detailed knowledge of Choctaw medicinal plants. In the early 1830's, having lost a number of pa-

tients, he became dissatisfied with the medicines he was using and decided to investigate Choctaw herbal medicine. He got in touch with the leading doctor (*alikchi chito*, "big doctor") of the Southern or Sixtowns group of Choctaw. This Indian doctor was evidently much disturbed by the advanced stage of Choctaw acculturation at that time, for he sent word to Lincecum that he would be "willing to teach what he knew about medicine before he died to somebody, and to a white man in preference to his own people, because the white man would place it on paper and preserve it" (ibid., 1904a, p. 494). The pay for his services as an informant was to be 50 cents a day and his food.

The Choctaw doctor met Lincecum at a certain bluff on the Noxubee River, and the two men lived in the woods for six weeks. The Choctaw collected plants alone during the day, and in the evening before a fire "he unrolled his specimens of medicinal plants and laid them in order on his right hand where he was sitting. He then took them up, one by one, described the kind of soil they were found in, their use, the season to collect them and what other plants they were sometimes combined with" (ibid., pp. 495–496). Using his system for recording Choctaw, Lincecum wrote down everything that the doctor told him, and he also preserved small specimens of each plant. At the close of the 6-week period the doctor had Lincecum read back to him everything that he had dictated. At this time errors were corrected and additions made.

Unfortunately this remarkable record of Choctaw medicinal plants does not seem to have survived. It is not among the Lincecum manuscripts in the University of Texas Library, and the living descendants of Lincecum do not know of it. Nothing remains but the scattered remarks in Lincecum's medical herbarium. Undoubtedly many other plants in the herbarium were used by the Choctaw, but the present record does not permit them to be specified.

In the sections that follow only such passages have been taken from Lincecum's herbarial notes as seem to be pertinent to Indian medicinal usage. Lincecum's statements are enclosed in quotation marks. When Lincecum gives Chickasaw or Choctaw names, the nearest equivalents in Byington's Choctaw dictionary (Byington, 1915) have been inserted in brackets. Aside from simplifying the spelling of a few words, such as "Chocktaw" and "Chickesaw," no further editorial changes have been made.

### CHOCTAW

Cushman (1899, pp. 228–229) has given the English names of seven medicinal plants used by the Mississippi Choctaw, presumably in the middle of the nineteenth century. Fifty-three medicinal plants have been reported in the literature of the current century. From the Choctaw of Bayou Lacomb in southeastern Louisiana Bushnell (1909, pp. 23–24) collected 25 plants in 1909. All these are identified by scientific name as well as by Choctaw name, and only one appears on Cushman's earlier list (its use is not given by Cushman). About 1918 Swanton (1931, pp. 237–238) obtained a list of 12 medicinal plants from a Choctaw informant in eastern Mississippi. These plants are identified only by Choctaw and English names, but they do not appear to duplicate any plants on the Cushman and Bushnell lists. Taylor (1940, *passim*) does not make use of the Cushman and Swanton lists, but she incorporates the Bushnell list of 25, to which are added plants collected in her own field work among the Choctaw in the 1930's. She does not state whether her field work was done among the Mississippi or the Louisiana Choctaw. Her contribution to Choctaw medical ethnobotany consists of new uses for six plants on the Bushnell list and 16 plants previously unreported from any Choctaw group. To this may be added the Lincecum record, which provides data on 16 plants used by the Choctaw early in the nineteenth century:

*Polygonum aviculare* L., deerweed, knotgrass, pinkweed. "Whole plant. A strong tea of this plant drunk freely, is the Choctaw remedy to prevent abortion. They have the utmost confidence in its powers; they all know it, and consequently abortion is a circumstance of very uncommon occurrence."

*Heuchera americana* L., alum root, rock geraneum. "The root. Astringent, tonic. This is a

valuable remedial agent, useful in all cases requiring powerful astringents; it has been noticed and used by all the different aboriginal tribes with whom I have become acquainted in the South [Choctaw, Chickasaw, and Creek]."

*Tephrosia elegans* Nutt. Lincecum does not link this plant with any specific Indian group, but in view of certain remarks in his autobiography it is most likely of Choctaw origin. "The root of this plant is an excellent article in bad coughs. The method of using it, is, to carry it about you, and chew it frequently through the day, swallowing juice. If the bowels become loose, you have swallowed a little too much; diminish the quantity so as to properly regulate the bowels, and continue its use for a long time. This is an Indian remedy. . . "

*Geraneum maculatum* L., spotted crane's-bill. "Root. Powerful astringent. The Choctaws consider it as the most effectual of their remedies for the cure of the venereal."

*Vitis aestivalis* Michx., summer grape. "Refrigerant, tonic, acid. I was witness to a case while I resided with the Choctaw Indians, which to me was very singular. There was a woman between 14 and 15 years of age, who died in childbed, leaving her infant child to the care of its grandmother. This old woman was 55 years of age when she took the child, and had not nursed a child since the mother of the infant in question was weaned. She took the infant and as is the custom with Indian women, she cried and grieved over it, sympathizing with and strongly desiring that she might give nourishment to it, and be able to raise up the infant to fill the place of its deceased mother; and all the time, as often as five or six times a day she washed her breast with and drank freely of the water of the grape vine. The result was that in the course of a week she began to secrete milk, and very soon her breasts were full and plump, and she nourished the child sufficiently to keep it healthy and fat. She told me that it was the custom of her country women."

*Sida hederacea* Torr., round-leaved sida. "Choctaw name: *Shaka oakheesh* [probably *sheki*, buzzard; *okhi*$^{n}$*sh*, medicine]. The root. Mucilaginous. It is used by the Choctaws in dysentery, diarrhea, inflammation of the bowels, burns, etc. The root when dried is easily pulverized. . . " The Choctaw, like the Creek and Chickasaw, believed that many diseases were caused by animals. (Sawnton, 1931, pp. 235, 237). *Sheki okhi*$^{n}$*sh*, "buzzard medicine", may indicate that certain intestinal disorders were ascribed to this bird. For reference to another animal, the fox, see *Eryngium aquaticum* below.

*Aralia racemosa* L., American spikenard, Indianroot. "Choctaw name: *tally thla,po,la* [possibly *tala*, name of a certain root; *lopoli* to pass through slowly]. The berries, the root. Stimulant, expectorant. The Choctaws use it for many complaints among their children. In all cases where we use paregoric, Bateman's drops, Godfrey's cordial, etc., they use the spikenard. . . For this purpose they boil a little of the root in clear water, sweeten the decoction, and give it pretty freely to children of any age, who are troubled with gripes, colic, etc. . . In bad cases of putrid sore eyes, the Choctaws boil up a quantity of the root, and while it is boiling, hotsteam their eyes over it. Two or three applications generally cure them."

*Eryngium aquaticum* L., bitter snakeroot, rattlesnake master. "Choctaw name: *Pis, hok, chu, la* [*pishuk*, name of a weed used in dying red; *chula*, fox]. The root. Powerful diuretic, expectorant, stimulant, and anti-poison—good for snakebite. The Choctaw cure gonorrhea with this plant."

*Asclepias verticillata* L., milkweed. "The root. Sudorific, stimulating. The Choctaws esteemed it among their most valuable remedies for snakebite. They administered it in strong decoction, and chewed the root, swallowing the saliva while chewing."

*Cephalanthus occidentalis* L., buttonbush. "Bark of the root and of the tree. Tonic, febrifuge. A strong decoction of the bark of the tree is a favorite medicine with the Choctaw Indians for dysentery."

*Galium asprellum* Michx., bedstraw. "Whole plant. Diaphoretic, diuretic. The Choctaw cure measles with it—and go in the rain, water, and cold all the time."

*Galium boreale* L., bedstraw. "Choctaw name: *Ahoyo oakheesh* [*ohoyo*, woman; *okhi*$^{n}$*sh*, medicine]. The whole plant. Diuretic, diaphoretic, and deobstruant. This is the article [decoction made from the whole plant] used by the Choctaw women for the purpose of preventing impregnation. They told me that it proved uniformly successful, without injuring the health! I have abundant testimony of this statement."

*Galium uniflorum*, Michx., bedstraw. "Whole plant. Astringent, good dye weed. The Choctaws made frequent use of this family of plants, in all cases requiring diuretic, and diaphoretic action."

*Nabalus asper* (Michx.) T & G, rough white lettuce. "Secernant, stimulant, anodyne. Electchee Chitto [Alikchi Chito], the Six Town doctor, used a decoction of the roots and tops of this plant as a stimulating diuretic and anodyne, taken occasionally, according to its effects on the patient." Reference is made here to the Choctaw doctor who met Lincecum in the woods and taught him Choctaw herbal medicine.

*Eupatorium ageratoides* L. f., white snakeroot. "Choctaw name: *noota ikheesh* [*noti*, tooth; *ikhe"sh*, medicine]. Warming stimulant and tonic. The Choctaw and Chickasaw Indians use it, by chewing and holding the roots in the mouth, for toothache."

*Echinacea purpurea* (L.) Moench, purple coneflower. "The tincture of the roots of this plant has been used with success in bad cough, and dyspepsia attended with a bad cough... The Choctaws use it for the above purposes, by chewing and swallowing the saliva. They keep a small piece of the root in the mouth nearly all the time, continuing its use for a long time."

One notable fact emerges when Lincecum's early nineteenth century list of Choctaw medicinal plants is compared with lists of the twentieth century. Only one plant, *Cephalanthus occidentalis*, is found in the later lists (Bushnell, 1909, p. 24), and it is reported as used for sore eyes and toothache, not for dysentery, as indicated by Lincecum. The recent lists of plants and their uses do not show a very large number of correspondences, which is probably best explained by incompleteness of data and by individual and local group variation. But the correspondences between nineteenth-century lists and recent lists are practically nonexistent. It thus appears that Choctaw herbal medicine changed considerably during the hundred-year period and that the plants in use in more recent times are not especially representative of those used in aboriginal times. This conclusion is also supported by the plaintive remark of the Sixtowns Choctaw doctor in the early 1830's about the lack of interest in medicinal plants among his own people.

Lincecum mentions no plants that were used as emetics, an absence that agrees with all later lists. The Choctaw are said to have induced vomiting by inserting a finger or a feather in the throat (Swanton, 1931, p. 233; Taylor, 1940, p. 70). Taylor (1940, p. 70) has called attention to the absence among the Choctaw of any plants effectively used as antiperiodics and counterirritants. Lincecum's data do not conflict with this observation.

Some uses of these plants by the Choctaw are either unique or of rare occurrence in the Southeastern area. According to Lincecum, the Choctaw used the sap of *Vitis aestivalis* to induce lactation, which is the first report from the Southeast of a plant used as a lactagogue. The same is true regarding *Polygonum aviculare*, a decoction of which Choctaw women used to prevent miscarriage. The Choctaw used *Galium boreale* as a contraceptive, a usage that thus far has been reported only among the Cherokee, who used *Cicuta maculata* for this purpose (Mooney and Olbrechts, 1932, pp. 117–118; Olbrechts, 1931, p. 19). Olbrechts (ibid.) has stated his belief that the use of *Cicuta maculata* as a contraceptive among the Cherokee was probably derived from European settlers. He cites the resemblance of *Cicuta maculata* to parsley, especially in the early growth phase, and points out that parsley is still popular as an abortive in several European countries. The use of *Galium boreale* by the Choctaw suggests that herbal contraceptives may have been aboriginal in the Southeast.

### CHICKASAW

At present very little is known about Chickasaw medicinal plants. Adair (1775, pp. 122, 164–167), writing in the latter part of the eighteenth century, refers to only two medicinal plants that can be attributed safely to the Chickasaw Indians. Swanton (1928a, pp. 266–268) has published a list of 25 medicinal plants he obtained from a Chickasaw doctor in Oklahoma sometime between the years 1915 and 1924. Most of these plants are identified by Chickasaw names, and sixteen are also identified by common English names. Taylor (1940, *passim*) has assigned scientific names to eight of the latter. To Swanton's list may be added the following six plants reported by Lincecum:

*Botrychium virginianum* (L.) Sw., Virginia grape-fern. "Chickasaw name: *hoeta hocksish*,

puke weed [Choctaw: *hoeta*, vomit; *hakshish*, root]. Emetic, diaphoretic, expectorant. I saw a Chickasaw Indian using the decoction of the root of this plant for an emetic; it operated finely. After the operation was over, he took some Tomfulla water [liquid from a pot of hominy] and said, 'I was sick but I am now well.' "

*Heuchera americana* L. See Choctaw list.

*Chaerophyllum procumbens* (L.) Crantz, spreading chervil. "Chickasaw name: *shuah hokshoop*, stinking root [Choctaw: *shua*, stinking; *hakshup*, bark, husk, etc.]. The root. Emetic, poisonous. The Chickasaw use this article as an emetic, and it seems to operate very kindly, carrying off the morbid very well, always giving relief to the patient very similar to the lobelia."

*Dasystoma pedicularia* (L.) Benth., fern-leaved false foxglove. "Anti-scorbutic, emetic. The Chickasaw Indians use this plant for an emetic. It resembles in its action the lobelia. The Chickasaw use it with impunity."

*Eupatorium ageratoides* L. f. See Choctaw list.

*Verbesina virginica* L., Virginia crownbeard. "Deobstruant, stimulant, diuretic, antivenereal. A tea of the root of this plant, is, with the Chickasaw Indians, a very certain cure for Fluor Albus, and in almost all cases of uterine weakness . . . I found the Chickasaw Indians using this article 20 years ago. This article was written in 1846, after experimenting with it."

Lincecum's list of six Chickasaw medicinal plants does not appear to duplicate in any way the 25 plants on the Swanton list. Adair's two eighteenth century Chickasaw medicinal plants do not appear on Swanton's list either. As in the case of the Choctaw, it seems that there has also been much change in Chickasaw materia medica since the early nineteenth century. In a chart Taylor (ibid., p. 74) has indicated the absence of herbal emetics among the Chickasaw. Adair (1775, pp. 122, 164–167), Speck (1907b, pp. 55, 56), and Swanton (1928a, p. 268) all refer to specific ceremonial emetics, and Lincecum gives three additional plants used for this purpose.

### CREEK

Creek herbal medicine is much better known. In 1904–05 Speck (1907a, pp. 118–119, 124–133, 144) obtained a list of 17 medicinal plants from the Oklahoma Creek. Eleven of these are identified by scientific name, the remainder by English or Creek names. Swanton (1928b, pp. 639–663) has published data on 79 medicinal plants obtained from Creek informants in Oklahoma during the years 1911–12. Thirty-four of these plants are identified by scientific names; the others are identified by English and Creek names. Swanton calls attention to the fact that four of these plants are mentioned in late eighteenth century sources and that one is mentioned in an early nineteenth century source, but there are no correspondences in usage. Seven plants on the Speck list also occur on Swanton's list, but in only one instance are the uses similar. Taylor (1940, *passim*) has listed 29 Creek medicinal plants, most of which are derived from Swanton. To this we can add Lincecum's meager list of three plants:

*Persea pubescens* (Pursh) Sarg., swamp bay. "The root. Diaphoretic, hydragogue, alterant. The Muscogee, and nearly all the tribes of Southern Indians, use this article [a decoction] as a diaphoretic in fevers of all descriptions. It is also extensively used by them in dropsy. . . "

*Heuchera americana* L. See Choctaw list.

*Manfreda virginica* (L.) Salisb., false aloe. "The root. Mucilaginous. The root of this plant boiled in sweet milk and taken freely, or chewed and swallowed is a certain cure for the bite of the rattlesnake. I have known it done several times. It is a Muscogee remedy."

Of these three plants only *Manfreda virginica* appears on later lists (Swanton, 1928b, p. 645). The uses of this plant are approximately the same for both early nineteenth and early twentieth centuries, although Lincecum reports its use internally for snakebite, whereas Swanton indicates an external use. Among Lincecum's Choctaw, Chickasaw, and Creek plants, this is the nearest identity of both plant and use that occurs in early and late times.

### SUMMARY AND CONCLUSIONS

Twenty-two medicinal plants used by Choctaw, Chickasaw, and Creek Indians in the early nineteenth century have been identified on the basis of the actual plants in Lincecum's surviving medical herbarium and his recollections of their uses by these Indians. Of these, 16 were used by the Choc-

taw, 6 by the Chickasaw, and 3 by the Creek. Although divorced from myth and ritual, this list of plants and the accompanying data on usage add to our knowledge of folk medicine among these Muskhogean-speaking peoples.

Lincecum's list of 22 plants contains only 6 that have hitherto been reported for any specific Southeastern Indian group. Two of these have previously been reported for the same group—*Cephalanthus occidentalis* for the Choctaw, *Manfreda virginica* for the Creek. Only for the latter are the reported uses similar. The following five plants on Lincecum's list are now recorded for these Southeastern Indian groups: *Botrychium virginianum*, Chickasaw and Cherokee (Mooney and Olbrechts, 1932, p. 177); *Vitis aestivalis*, Choctaw, Creek (Swanton, 1928b, pp. 645, 660), and Cherokee (Mooney and Olbrechts, 1932, p. 660); *Eryngium aquaticum*, Choctaw, Alabama (Taylor, 1940, p. 45), Koasati (ibid.), and Cherokee (Mooney and Olbrechts, 1932, p. 245); *Cephalanthus occidentalis*, Choctaw (Bushnell, 1909, p. 24), Chickasaw (Taylor, 1940, p. 58), and Koasati (ibid.); *Verbesina virginica*, Chickasaw and Choctaw (Bushnell, 1909, p. 23). Identity of usage occurs only in the case of *Botrychium virginianum*, which both Chickasaw and Cherokee used for an emetic.

Two plants on Lincecum's Choctaw list were used for purposes not previously reported among Southeastern Indians—*Vitis aestivalis* to induce lactation and *Polygonum aviculare* to prevent miscarriage. The aboriginal use of herbal contraceptives in the Southeast, reported in recent times for the Eastern Cherokee and doubted by Olbrechts, may now be reexamined in the light of Lincecum's report of a similar use among the nineteenth century Choctaw.

Such evidence as we have—and the Lincecum record is about all that we do have—indicates that herbal medicine among the Choctaw of Mississippi and Louisiana changed markedly after the early nineteenth century. The principal changes were in plant species and their uses rather than in methods of drug preparation. It should be noted that these Choctaw did not remove to Indian Territory but remained in their aboriginal area. Although less evidence is available, similar and probably even more extensive changes occurred in Chickasaw and Creek medicine, for these two groups emigrated to a different natural environment. Few will doubt that much change did occur in the herbal medicine of all these people. The point is that heretofore very little concrete evidence of change has been available.

## LITERATURE CITED


Adair, James. *The history of the American Indians*. London, 1775.

Bushnell, David I., Jr. *The Choctaw of Bayou Lacomb, St. Tammany Parish, Louisiana*. Bur. Amer. Ethnol. Bull. 48. 1909.

Byington, Cyrus. *A dictionary of the Choctaw language* (edited by John R. Swanton and Henry S. Halbert). Bur. Amer. Ethnol. Bull. 46. 1915.

Cushman, H. B. *History of the Choctaw, Chickasaw, and Natchez Indians*. Greenville, Tex., 1899.

Geiser, Samuel Wood. *Naturalists of the frontier*. Dallas, 1948.

Lincecum, Gideon. *Autobiography of Gideon Lincecum*. Publ. Mississippi Hist. Soc. **8:** 443–519. 1904a.

———. *Choctaw traditions about their settlement in Mississippi and the origin of their mounds*. Publ. Mississippi Hist. Soc. **8:** 521–542. 1904b.

Mooney, James, and Olbrechts, Frans M. *The Swimmer manuscript: Cherokee sacred formulas and medicinal prescriptions*. Bur. Amer. Ethnol. Bull. 99. 1932.

Olbrechts, Frans M. *Cherokee belief and practice with regard to childbirth*. Anthropos **26:** 17–33. 1931.

Speck, Frank G. *The Creek Indians of Taskigi town*. Amer. Anthrop. Assoc. Mem. 2. 1907a.

———. *Notes on Chickasaw ethnology and folklore*. Journ. Amer. Folk-lore **20:** 50–58. 1907b.

Swanton, John R. *Social and religious beliefs and usages of the Chickasaw Indians*. 44th Ann. Rep. Bur. Amer. Ethnol.: 169–273 1928a.

———. *Religious beliefs and medical practices of the Creek Indians*. 42d Ann. Rep. Bur. Amer. Ethnol.: 473–672. 1928b.

———. *Source material for the social and ceremonial life of the Choctaw Indians*. Bur. Amer. Ethnol. Bull. 103. 1931.

Taylor, Lyda Averill. *Plants used as curatives by certain Southeastern tribes*. Cambridge, Mass., 1940.